

# **FAA National Software Conference, May 2002**

## **Use of Reuse - Act I**

### **The Use of Reuse**

**brought to you by the RSC developer  
(Jeff)**

**the integrator and applicant using the RSC  
(Tom) and**

**the Certification authority accepting the  
first version of the RSC (Clyde)**

**RSC - Reusable Software Component**

**at the 2002 FAA Software Conference**

### **The RSC Developer**

- **The DEOS Lite operating system is being developed in Honeywell at our Software Solutions Laboratory – Bangalore. The DEOS Lite development is being managed by Honeywell Laboratories in Minneapolis, MN.**
- **Jeff is the Software DER acting on behalf of the RSC developer.**

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The integrator and/or applicant using the RSC

- This Reusable System Component, the DEOS Lite operating system, will be first used in our KSG 7200 ADAHRS(Air Data, Altitude and Heading Reference System) Line Replaceable Unit(LRU).
- Tom is the Software DER acting on behalf of the integrator/applicant.

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Certification authority acceptance of the first version of a RSC

- The KSG 7200 unit will be certified at the Wichita ACO.
- Clyde is the certification authority acting on behalf of the Wichita ACO accepting the first version of the RSC - DEOS Lite contained within the KSG 7200 LRU.

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### Some questions the RSC developer might be asked:

- Did you produce a PSAC as early as possible in the project?
- Were safety related items documented in your PSAC?
- How will your PSAC and other plans be coordinated with the certification authority?
- How are you sure the RSC developer is following these plans?
- How will you notify the other stakeholders of your RSC, of progress and deviations from your plans?
- Do your RSC stakeholders understand what will be addressed in the SCI and SAS of the RSC?
- How will you maintain a list of the users of your RSC?

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### Some questions the applicant might be asked:

- How have you integrated the RSC developer's plans into your data submittals?
- Have you specified the data needed from the RSC developer to support your project?
- How have you integrated the RSC developer's plans into your plans, concerning the DO-178B objectives that they do not meet?
- How do your plans address compliance with objectives your RSC developer did not meet?
- How do you decide if safety issues identified by the RSC developer apply to your use of the RSC?

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**Some questions the certification authority might be asked:**

- How closely have or do you plan to work with the applicant and the RSC developer?
- Do you expect to involve other FAA personnel to help you address policy and technical issues on this project?
- Will it be difficult to review the RSC developer's and the applicant's plans to make sure they are each planning to do the right things?
- What kind of reviews do you anticipate of the RSC developer's and the applicant's life cycle data?
- Do you anticipate any problems approving data received from the RSC developer or the applicant?
- Do you know what that acceptance letter of the RSC will say?

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**Questions the NEXT cert. authority of the RSC might be asked**

- As the next certification authority of a previously accepted RSC, what would you do if you did not agree that the original certification should not have been granted?
- If you thought that the issues which arose during your acceptance of the RSC demonstrated that the original certification should not have been granted, how would you broach this subject with the original certification office?
- If the certification data submitted to and reviewed by yourself indicated that this RSC is no longer fit for reuse, how would you go about addressing this issue?

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### The Use of Reuse

- Does anyone in the audience have an issue they would like us to discuss and/or address?

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There are many positions one could have on this topic!



Do not put yourself in this one!

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